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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,381	09/18/2003	Gunter Pietsch	02198/0200044-US0	5027
7278	7590	02/03/2006	EXAMINER	
DARBY & DARBY P.C. P. O. BOX 5257 NEW YORK, NY 10150-5257			RAZA, SAIRA B	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,381

Applicant(s)

PIETSCH, GUNTER

Examiner

Saira Raza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 18-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 & 5-17 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7Dec05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The rejections have been altered to reflect the amended claims.

Election/Restrictions

2. Newly submitted claims 18-33 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Inventions of claims 1-17 and claims 18-33 are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be made by a materially different process, such as via a coaxial fluid ejector.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18-33 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

3. Claim 10 is objected to because of the following informalities: the “non-dissolver” has been incorrectly crossed out. Appropriate correction is required.
4. Claim 12 is objected to because of the following informalities: “incapsulated” should read -- encapsulated--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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6. Claims 1-2 and 5-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Pietsch et al. (US 4,748,146) and Sheiham et al. (EP 0 520 639 A1).

7. In reference to claim 1, Pietsch et al. discloses: a process for encapsulating a solution of color reactants (one example cited is Crystal Violet Lactone) of color-reaction systems present in an aqueous emulsion accomplished by means of conventional microencapsulation processes, comprising: (a) Dissolving the color reactant in a solvent; (b) Mixing a non-dissolver into solution (a) in an amount that establishes a supersaturated solution; (c) Immediately emulsifying the supersaturated solution of (b) in the aqueous phase while mixing, and immediately thereupon the encapsulating the supersaturated solution (Column: Lines :: 2:39).

8. The high mixing speeds required in claim 1 are inherent properties of the process of mixing (b) and (c) above to ensure a homogenous solution.

9. In reference to claims 5 & 6, Pietsch et al. describes the addition of an aromatic solvent or "good solvent," which is readily capable of dissolving the reactants of the color reaction systems (4:9). Furthermore, in reference to claim 7, Pietsch et al. discloses that alkylated biphenyls and alkylated naphthalenes can be utilized as the aforementioned aromatic solvent (4:12).

10. In reference to claims 8 & 9, Pietsch et al. discloses that a non-aromatic solvent is used as the non-dissolver, specifically, an aliphatic and or cycloaliphatic hydrocarbonis used as the nonaromatic solvent (4:36-55).

11. In reference to claims 10, Pietsch et al. discloses that the non-dissolver is present in the solvent mixture in a weight ratio of more than 1:1 (5:9-13).

12. In reference to claims 12-16, Pietsch et al. discloses that a basic color-producing substance, such as a phthalide derivative, is encapsulated as a color reactant of color-reaction systems. Additionally, N-benzoyl leucomethylene blue is used as a color producing substance. An acid color

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reactant of the basic color-producing substance, such as an acidic phenolic compound, is encapsulated (2:55 to 3:39).

13. In reference to claim 17, a coacervation process can be used for encapsulation (5:45-48).

14. The microencapsulation process of Pietsch et al. does not include the addition of a vegetable oil C₁-C₈ alkyl ester as the solvent; specifically, Pietsch et al. does not refer to the vegetable oil C₁-C₈ alkyl ester as a purified rapeseed oil methyl ester. Hence attention is directed towards the Sheiham et al. (EP 0 520 639 A1) reference.

15. Sheiham discloses solvent compositions for use in pressure-sensitive copying paper, wherein chromogenic materials are dissolved in the solvent composition and encapsulated via a coacervation technique. The solvent composition comprises a vegetable oil and an ester of an acid derived from vegetable oil. Wherein the ester moiety may have only one carbon atom, i.e. methyl, or several carbon atoms. A specific example of the vegetable oil includes rapeseed oil. Therefore the ester of an acid derived from vegetable oil would include the methyl ester of vegetable oil or the methyl ester of rapeseed oil (Page:Lines:: 3:5 to 4:20)

16. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include in the solvent of Pietsch, the solvent composition of Shieham. The suggestion/motivation would have been obvious in order to eliminate or reduce problems associated with pressure-sensitive copying paper, such as wide primary droplet size distribution, post-printing discoloration, and discoloration on storage (3:5-39). Therefore, it would have been obvious to combine Sheiham with Pietsch to obtain the invention as specified in claims 1 and 2.

17. The combination of Pietsch and Sheiham discloses the claimed invention except for usage of approximately 0.1 to 9 wt. parts vegetable oil C₁-C₈ alkyl ester per 1 wt. part good solvent. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to

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utilize the C1-C8 alkyl ester of vegetable oil in an amount between 0.1 and 9 wt. parts, since it has been held that where the general conditions of a claim are disclosed in the art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Allowable Subject Matter

18. Claims 3-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments


19. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Raza whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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